Contents to volume 254

Hypothesis

Presence of a basic amino acid residue at either position 66 or 122 is a condition for enzymic activity in the ribonuclease superfamily (FEB 07488) *J.J. Beintema* 1

Research Letters

Adenosine formation by isolated rat kidney mitochondria (FEB 07511) *W. Henke, M. Ziegler, W. Dubiel, K. Jung* 5

Synthesis of spin-labeled 2-azido-ATP: evidence for distinct nucleotide-binding sites in calcium pump protein from sarcoplasmic reticulum (FEB 07510) *P. Jakobs, H.E. Sauer, J.O. McIntyre, S. Fleischer, W.E. Trommer* 8

Probing the topography of the intramembrane part of Na^+,K^+-ATPase by photolabelling with 3-(trifluoromethyl)-3-(*m*-[^{125}I]iodophenyl)diazirine: Analysis of the hydrophobic domain of the β-subunit (FEB 07509) *E.N. Chertova, S.V. Lutsenko, N.B. Levina, N.N. Modyanov* 13

The Na^+-motive respiration in *Escherichia coli* (FEB 07508) *A.V. Avetisyan, P.A. Dibrov, V.P. Skulachev, M.V. Sokolov* 17

Identification of a phosphorylation site of the rat insulin receptor catalyzed by protein kinase C in an intact cell (FEB 07524) *O. Koshio, Y. Akanuma, M. Kasuga* 22

An increase in intracellular free calcium is an early event during differentiation of cultured human keratinocytes (FEB 07523) *G.R. Sharpe, J.I. Gillespie, J.R. Greenwell* 25

Enhancement of arachidonic acid liberation by protein kinase C activator is partially dependent on extracellular Na^+ in rabbit platelets (FEB 07525) *S. Akiba, T. Sato, T. Fujii* 29

Nitrite reductase from *Pseudomonas aeruginosa*: sequence of the gene and the protein (FEB 07530) *M.C. Silvestrini, C.L. Galeotti, M. Gervais, E. Schininà, D. Barra, F. Bossa, M. Brunori* 33

Direct observation of substrate binding to ferrous-CO cytochrome P-450-CAM using ^{19}F NMR (FEB 07537) *G.B. Crull, J.V. Nardo, J.H. Dawson* 39

Addition of a methyl group changes both the catalytic velocity and thermostability of the neutral protease from *Bacillus stearothermophilus* (FEB 07538) *M. Takagi, T. Imanaka* 43

Ubisemiquinone in the NADH-ubiquinone reductase region of the mitochondrial respiratory chain (FEB 07536) *D.S. Burbaev, I.A. Moroz, A.B. Kotlyar, V.D. Sled, A.D. Vinogradov* 47

High incorporation of [^{3}H]inositol into phosphoinositides of human platelets during reversible electropermeabilisation (FEB 07527) *K.S. Authi, K. Hughes, N. Crawford* 52

Heterogeneous activation of protein kinase C during rat liver regeneration induced by carbon tetrachloride administration (FEB 07526) *Y. Sasaki, N. Hayashi, T. Ito, H. Fusamoto, N. Sato, T. Kamada* 59

Translational in vitro activity of the 3a gene and the coat protein gene derived from brome mosaic virus RNA 3 by site-specific cleavage with RNase H (FEB 07513) *E.V. Smirnyagina, O.V. Karpova, N.A. Miroshnichenko, N.P. Rodionova, J.G. Atabekov* 66

Calmodulin-independent bovine brain adenylate cyclase: Amino acid sequence and nucleotide sequence of the corresponding cDNA (FEB 07516) *V.M. Lipkin, N.V. Khramtsov, S.G. Andreeva, M.V. Moshnyakov, G.V. Petukhova, T.V. Rakitina, E.A. Feshchenko, K.A. Ishchenko, S.F. Mirzoeva, M.N. Chernova, S.M. Dranytsyna* 69

A model for the molecular organization of cytochrome β-561 in chromaffin granule membranes (FEB 07514) *M.D. Esposti, Yu.A. Kamensky, A.M. Arutjunjan, A.A. Konstantinov* 74

Energization of the membrane prevents the formation of tight inactive complexes of ATPase with MgADP in submitochondrial particles (FEB 07515) *B.V. Chernyak, E.Yu. Khodjaev* 79

Site-selective 8-Cl-cAMP which causes growth inhibition and differentiation increases DNA (CRE)-binding activity in cancer cells (FEB 07520) *M.I. Mednieks, H. Yokozaki, G.R. Merlo, G. Tortora, T. Clair, S. Ally, E. Tahara, Y.S. Cho-Chung* 83

Mapping of β-adrenoceptor coupling domains to G_s-protein by site-specific synthetic peptides (FEB 07517) *D. Palm, G. Münch, C. Dees, M. Hekman* 89

Interactions of formylmethionyl-leucyl-phenylalanine, adenosine, and phosphodiesterase inhibitors in human monocytes: Effects on superoxide release, inositol phosphates and cAMP (FEB 07518) *K.R.F. Elliott, E.J. Leonard* 94

Determination of PQQ in quinoproteins with covalently bound cofactor and in PQQ-derivatives (FEB 07519) *R.A. van der Meer, A.C. Mulder, J.A. Jongejan, J.A. Duine* 99

Neutralizing monoclonal antibody specific for α-bungarotoxin: Preparation and characterization of the antibody, and localization of antigenic region of α-bungarotoxin (FEB 07521) *R. Kase, H. Kitagawa, K. Hayashi, K. Tanoue, F. Inagaki* 106

Amino acid sequence around the thiolester of α_2-macroglobulin from plasma of the crayfish, *Pacifastacus leniusculus* (FEB 07528) *M. Hall, K. Söderhäll, L. Sottrup-Jensen* 111

Identification by flow cytometry of two distinct rhodamine-123-stained mitochondrial populations in rat liver (FEB 07531) *C. Lopez-Mediavilla, A. Orfao, M. Gonzalez, J.M. Medina* 115

The 34 kDa mitochondrial protein, phosphorylation of which is inhibited by vanadate, is the α-subunit of succinyl-CoA synthetase (FEB 07532) *J. Křivánek, L. Nováková* 121

Identity of G_{D1C}, G_{T1a} and G_{O1b} synthase in Golgi vesicles from rat liver (FEB 07533) *H. Iber, K. Sandhoff* 124

Synthesis of alkylating oligonucleotide derivatives containing cholesterol or phenazinium residues at their 3'-terminus and their interaction with DNA within mammalian cells (FEB 07534) *A.S. Boutorin, L.V. Gus'kova, E.M. Ivanova, N.D. Kobetz, V.F. Zarytova, A.S. Ryte, L.V. Yurchenko, Yurchenko,, V.V. Vlassov* 129

Lack of arginine- and polyphosphate-storage pools in a vacuole-deficient mutant (end1) of *Saccharomyces cerevisiae* (FEB 07535) *B. Westenberg, T. Boller, A. Wiemken* 133

An endogenous 'hypertensive factor' enhances the voltage-dependent calcium current (FEB 07522) *M.A. Simmons, E.C. Johnson, J.B. Becker, D.G. Todd, V.E. Reichenbecher, W.D. McCumbee, G.L. Wright* 137

Tissue specific distribution of calcyclin – 10.5 kDa Ca^{2+}-binding protein (FEB 07529) *J. Kuźnicki, A. Filipek, P. Heimann, L. Kaczmarek and B. Kamińska* 141

Phosphorylation of small peptides by spleen TPK-IIA, a tyrosine protein kinase stimulated by polylysine and by high ionic strength (FEB 07539) *A.M. Brunati, F. Marchiori, P. Ruzza, A. Calderan, G. Borin and L.A. Pinna* 145

Chlorophyll and cytochrome *b*-559 content of the photochemical reaction center of photosystem II (FEB 07541) *J.P. Dekker, N.R. Bowlby, C.F. Yocum* 150

A novel, specific binding protein assay for quantitation of intracellular inositol 1,3,4,5-tetrakisphosphate ($InsP_4$) using a high-affinity $InsP_4$ receptor from cerebellum (FEB 07540) *F. Donié, G. Reiser* 155

Complete assignment of the ^1H NMR spectrum of a synthetic zinc finger from *Xfin*: Sequential resonance assignments and secondary structure (FEB 07548) *M.S. Lee, J. Cavanagh, P.E. Wright* 159

Use of synthetic peptides to study the substrate specificity of a thylakoid protein kinase (FEB 07550) *H. Michel, J. Bennett* 165

Measurement of cromakalim-induced ^{87}Rb flux in intact cells by NMR (FEB 07549) *M.P. Williamson* 171

Antithrombin Cambridge, 384 Ala to Pro: a new variant identified using the polymerase chain reaction (FEB 07556) *D.J. Perry, P.L. Harper, S. Fairham, M. Daly, R.W. Carrell* 174

Intracellular targetting signals of polymeric immunoglobulin receptors are highly conserved between species (FEB 07554) *G. Banting, B. Brake, P. Braghetta, J.P. Luzio, K.K. Stanley* 177

Chloride binding to photosystem II in the dark is in slow exchange (FEB 07542) *Y. Shachar-Hill, W.F. Beck, G.W. Brudvig* 184

AVP receptors of mouse Leydig cells are regulated by LH and E_2 and influenced by experimental cryptorchidism (FEB 07544) *A. Tahri-Joutei, G. Pointis* 189

Lipid phosphorylation in isolated rat liver nuclei: Synthesis of polyphosphoinositides at subnuclear level (FEB 07545) *S. Capitani, V. Bertagnolo, M. Mazzoni, P. Santi, M. Previati, A. Antonucci, F.A. Manzoli* 194

Flux-yield dependence of oxidative phosphorylation at constant $\Delta\tilde{\mu}H^+$ (FEB 07543) *R. Ouhabi, M. Rigoulet, B. Guerin* 199

In vivo ^{31}P NMR spectroscopic studies of soybean *Bradyrhizobium* symbiosis: Compartmentation and distribution of P metabolites (FEB 07546) *D.B. Rolin, P.E. Pfeffer, R.T. Boswell, J.H. Schmidt, S.I. Tu* 203

Identification of the ferroxidase centre in ferritin (FEB 07547) *D.M. Lawson, A. Treffry, P.J. Artymiuk, P.M. Harrison, S.J. Yewdall, Alessandra Luzzago, G. Cesareni, S. Levi, P. Arosio* 207

Arginine remarkably prolongs the lifetime of the M-intermediate in the bacteriorhodopsin photocycle at room temperature (FEB 07512) *M. Nakasako, M. Kataoka, F. Tokunaga* 211

Direct evidence that pyrophosphate:fructose-6-phosphate phosphotransferase can act as a glycolytic enzyme in plants (FEB 07552) *W.-D. Hatzfeld, J. Dancer, M. Stitt* 215

ENDOR study on the position of hydrogens close to the manganese cluster in S_2 state of photosystem II (FEB 07553) *A. Kawamori, T. Inui, T. Ono, Y. Inoue* 219

A phosphatase from chloroplast stroma of *Nicotiana tabacum* hydrolyses 2'-carboxyarabinitol 1-phosphate, the natural inhibitor of Rubisco to 2'-carboxyarabinitol (FEB 07555) *S. Gutteridge, B. Julien* 225

Author Index 231

Table of Contents 235

Notes to Authors 237

FEBS News

FEBS Advanced Courses 1989/90 239